

SEQUENCE LISTING

<110> Newman, Walter

<120> HMGB1 COMBINATION THERAPIES

<130> 3258.1008-001

<150> 60/427,846

<151> 2002-11-20

<160> 58

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<211> 215

<212> PRT

<213> Homo sapiens

<400> 1

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Met Gly Lys Gly Asp Pro Lys Lys Pro Arg Gly Lys Met Ser Ser Tyr
 1           5           10           15
Ala Phe Phe Val Gln Thr Cys Arg Glu Glu His Lys Lys Lys His Pro
 20           25           30
Asp Ala Ser Val Asn Phe Ser Glu Phe Ser Lys Lys Cys Ser Glu Arg
 35           40           45
Trp Lys Thr Met Ser Ala Lys Glu Lys Gly Lys Phe Glu Asp Met Ala
 50           55           60
Lys Ala Asp Lys Ala Arg Tyr Glu Arg Glu Met Lys Thr Tyr Ile Pro
 65           70           75           80
Pro Lys Gly Glu Thr Lys Lys Lys Phe Lys Asp Pro Asn Ala Pro Lys
 85           90           95
Arg Pro Pro Ser Ala Phe Phe Leu Phe Cys Ser Glu Tyr Arg Pro Lys
100          105          110
Ile Lys Gly Glu His Pro Gly Leu Ser Ile Gly Asp Val Ala Lys Lys
115          120          125
Leu Gly Glu Met Trp Asn Asn Thr Ala Ala Asp Asp Lys Gln Pro Tyr
130          135          140
Glu Lys Lys Ala Ala Lys Leu Lys Glu Lys Tyr Glu Lys Asp Ile Ala
145          150          155          160
Ala Tyr Arg Ala Lys Gly Lys Pro Asp Ala Ala Lys Lys Gly Val Val
165          170          175
Lys Ala Glu Lys Ser Lys Lys Lys Lys Glu Glu Glu Glu Asp Glu Glu
180          185          190
Asp Glu Glu Asp Glu Glu Glu Glu Asp Glu Glu Asp Glu Asp Glu
195          200          205
Glu Glu Asp Asp Asp Asp Glu
210          215

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<210> 2

<211> 215

<212> PRT

<213> Mus musculus

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<400> 2

Met	Gly	Lys	Gly	Asp	Pro	Lys	Lys	Pro	Arg	Gly	Lys	Met	Ser	Ser	Tyr
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Ala	Phe	Phe	Val	Gln	Thr	Cys	Arg	Glu	Glu	His	Lys	Lys	Lys	His	Pro
			20					25					30		
Asp	Ala	Ser	Val	Asn	Phe	Ser	Glu	Phe	Ser	Lys	Lys	Cys	Ser	Glu	Arg
		35					40					45			
Trp	Lys	Thr	Met	Ser	Ala	Lys	Glu	Lys	Gly	Lys	Phe	Glu	Asp	Met	Ala
	50					55					60				
Lys	Ala	Asp	Lys	Ala	Arg	Tyr	Glu	Arg	Glu	Met	Lys	Thr	Tyr	Ile	Pro
65					70					75				80	
Pro	Lys	Gly	Glu	Thr	Lys	Lys	Lys	Phe	Lys	Asp	Pro	Asn	Ala	Pro	Lys
				85					90					95	
Arg	Pro	Pro	Ser	Ala	Phe	Phe	Leu	Phe	Cys	Ser	Glu	Tyr	Arg	Pro	Lys
			100					105					110		
Ile	Lys	Gly	Glu	His	Pro	Gly	Leu	Ser	Ile	Gly	Asp	Val	Ala	Lys	Lys
		115					120					125			
Leu	Gly	Glu	Met	Trp	Asn	Asn	Thr	Ala	Ala	Asp	Asp	Lys	Gln	Pro	Tyr
	130					135					140				
Glu	Lys	Lys	Ala	Ala	Lys	Leu	Lys	Glu	Lys	Tyr	Glu	Lys	Asp	Ile	Ala
145					150					155				160	
Ala	Tyr	Arg	Ala	Lys	Gly	Lys	Pro	Asp	Ala	Ala	Lys	Lys	Gly	Val	Val
				165					170					175	
Lys	Ala	Glu	Lys	Ser	Lys	Lys	Lys	Lys	Glu	Glu	Glu	Asp	Asp	Glu	Glu
			180					185					190		
Asp	Glu	Glu	Asp	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Asp	Glu	Asp	Glu
		195					200					205			
Glu	Glu	Asp	Asp	Asp	Asp	Glu									
	210					215									

<210> 3

<211> 209

<212> PRT

<213> Homo sapiens

<400> 3

Met	Gly	Lys	Gly	Asp	Pro	Asn	Lys	Pro	Arg	Gly	Lys	Met	Ser	Ser	Tyr
1				5					10					15	
Ala	Phe	Phe	Val	Gln	Thr	Cys	Arg	Glu	Glu	His	Lys	Lys	Lys	His	Pro
			20					25					30		
Asp	Ser	Ser	Val	Asn	Phe	Ala	Glu	Phe	Ser	Lys	Lys	Cys	Ser	Glu	Arg
		35					40					45			
Trp	Lys	Thr	Met	Ser	Ala	Lys	Glu	Lys	Ser	Lys	Phe	Glu	Asp	Met	Ala
	50					55					60				
Lys	Ser	Asp	Lys	Ala	Arg	Tyr	Asp	Arg	Glu	Met	Lys	Asn	Tyr	Val	Pro
65					70					75				80	
Pro	Lys	Gly	Asp	Lys	Lys	Gly	Lys	Lys	Lys	Asp	Pro	Asn	Ala	Pro	Lys
				85					90					95	
Arg	Pro	Pro	Ser	Ala	Phe	Phe	Leu	Phe	Cys	Ser	Glu	His	Arg	Pro	Lys
			100					105					110		
Ile	Lys	Ser	Glu	His	Pro	Gly	Leu	Ser	Ile	Gly	Asp	Thr	Ala	Lys	Lys
		115					120					125			
Leu	Gly	Glu	Met	Trp	Ser	Glu	Gln	Ser	Ala	Lys	Asp	Lys	Gln	Pro	Tyr
	130					135					140				
Glu	Gln	Lys	Ala	Ala	Lys	Leu	Lys	Glu	Lys	Tyr	Glu	Lys	Asp	Ile	Ala
145					150					155				160	

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Ala Tyr Arg Ala Lys Gly Lys Ser Glu Ala Gly Lys Lys Gly Pro Gly
 165 170 175
 Arg Pro Thr Gly Ser Lys Lys Lys Asn Glu Pro Glu Asp Glu Glu Glu
 180 185 190
 Glu Glu Glu Glu Glu Asp Glu Asp Glu Glu Glu Glu Asp Glu Asp Glu
 195 200 205
 Glu

<210> 4
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 <212> PRT
 <213> Homo sapiens

<400> 4
 Pro Asp Ala Ser Val Asn Phe Ser Glu Phe Ser Lys Lys Cys Ser Glu
 1 5 10 15
 Arg Trp Lys Thr Met Ser Ala Lys Glu Lys Gly Lys Phe Glu Asp Met
 20 25 30
 Ala Lys Ala Asp Lys Ala Arg Tyr Glu Arg Glu Met Lys Thr Tyr Ile
 35 40 45
 Pro Pro Lys Gly Glu Thr
 50

<210> 5
 <211> 69
 <212> PRT
 <213> Homo sapiens

<400> 5
 Asn Ala Pro Lys Arg Pro Pro Ser Ala Phe Phe Leu Phe Cys Ser Glu
 1 5 10 15
 Tyr Arg Pro Lys Ile Lys Gly Glu His Pro Gly Leu Ser Ile Gly Asp
 20 25 30
 Val Ala Lys Lys Leu Gly Glu Met Trp Asn Asn Thr Ala Ala Asp Asp
 35 40 45
 Lys Gln Pro Tyr Glu Lys Lys Ala Ala Lys Leu Lys Glu Lys Tyr Glu
 50 55 60
 Lys Asp Ile Ala Ala
 65

<210> 6
 <211> 22
 <212> DNA
 <213> Homo sapiens

<400> 6
 gatgggcaaa ggagatccta ag

22

<210> 7
 <211> 29
 <212> DNA
 <213> Homo sapiens

<400> 7
gcggccgctt attcatcatc atcatcttc 29

<210> 8
<211> 22
<212> DNA
<213> Homo sapiens

<400> 8
gatgggcaaa ggagatccta ag 22

<210> 9
<211> 32
<212> DNA
<213> Homo sapiens

<400> 9
gcggccgctc acttgctttt ttcagccttg ac 32

<210> 10
<211> 21
<212> DNA
<213> Homo sapiens

<400> 10
gagcataaga agaagcaccc a 21

<210> 11
<211> 32
<212> DNA
<213> Homo sapiens

<400> 11
gcggccgctc acttgctttt ttcagccttg ac 32

<210> 12
<211> 24
<212> DNA
<213> Homo sapiens

<400> 12
aagttcaagg atcccaatgc aaag 24

<210> 13
<211> 32
<212> DNA
<213> Homo sapiens

<400> 13
gcggccgctc aatatgcagc tatatccttt tc 32

<210> 14
<211> 22
<212> DNA
<213> Homo sapiens

<400> 14

gatgggcaaaa ggagatccta ag

22

<210> 15
 <211> 24
 <212> DNA
 <213> Homo sapiens

<400> 15
 tcactttttt gtctcccctt tggg

24

<210> 16
 <211> 20
 <212> PRT
 <213> Homo sapiens

<400> 16
 Asn Ala Pro Lys Arg Pro Pro Ser Ala Phe Phe Leu Phe Cys Ser Glu
 1 5 10 15
 Tyr Arg Pro Lys
 20

<210> 17
 <211> 54
 <212> PRT
 <213> Homo sapiens

<400> 17
 Pro Asp Ser Ser Val Asn Phe Ala Glu Phe Ser Lys Lys Cys Ser Glu
 1 5 10 15
 Arg Trp Lys Thr Met Ser Ala Lys Glu Lys Ser Lys Phe Glu Asp Met
 20 25 30
 Ala Lys Ser Asp Lys Ala Arg Tyr Asp Arg Glu Met Lys Asn Tyr Val
 35 40 45
 Pro Pro Lys Gly Asp Lys
 50

<210> 18
 <211> 216
 <212> PRT
 <213> Homo sapiens

<400> 18
 Met Gly Lys Gly Asp Pro Lys Lys Pro Thr Gly Lys Met Ser Ser Tyr
 1 5 10 15
 Ala Phe Phe Val Gln Thr Cys Arg Glu Glu His Lys Lys Lys His Pro
 20 25 30
 Asp Ala Ser Val Asn Phe Ser Glu Phe Ser Lys Lys Cys Ser Glu Arg
 35 40 45
 Trp Lys Thr Met Ser Ala Lys Glu Lys Gly Lys Phe Glu Asp Met Ala
 50 55 60
 Lys Ala Asp Lys Ala Arg Tyr Glu Arg Glu Met Lys Thr Tyr Ile Pro
 65 70 75 80
 Pro Lys Gly Glu Thr Lys Lys Lys Phe Lys Asp Pro Asn Ala Pro Lys
 85 90 95
 Arg Leu Pro Ser Ala Phe Phe Leu Phe Cys Ser Glu Tyr Arg Pro Lys

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Ile	Lys	Gly	Glu	His	Pro	Gly	Leu	Ser	Ile	Gly	Asp	Val	Ala	Lys	Lys
		115					120					125			
Leu	Gly	Glu	Met	Trp	Asn	Asn	Thr	Ala	Ala	Asp	Asp	Lys	Gln	Pro	Tyr
	130					135					140				
Glu	Lys	Lys	Ala	Ala	Lys	Leu	Lys	Glu	Lys	Tyr	Glu	Lys	Asp	Ile	Ala
145					150					155					160
Ala	Tyr	Arg	Ala	Lys	Gly	Lys	Pro	Asp	Ala	Ala	Lys	Lys	Gly	Val	Val
				165					170					175	
Lys	Ala	Glu	Lys	Ser	Lys	Lys	Lys	Lys	Glu	Glu	Glu	Glu	Asp	Glu	Glu
		180					185					190			
Asp	Glu	Glu	Asp	Glu	Glu	Glu	Glu	Glu	Asp	Glu	Glu	Asp	Glu	Glu	Asp
		195					200					205			
Glu	Glu	Glu	Asp	Asp	Asp	Asp	Glu								
	210					215									

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<210> 19
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<212> PRT
<213> Homo sapiens
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<210> 20
<211> 74
<212> PRT
<213> Homo sapiens
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<400> 20
Phe Lys Asp Pro Asn Ala Pro Lys Arg Leu Pro Ser Ala Phe Phe Leu
 1           5           10          15
```

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```

Phe Cys Ser Glu Tyr Arg Pro Lys Ile Lys Gly Glu His Pro Gly Leu
      20      25      30
Ser Ile Gly Asp Val Ala Lys Lys Leu Gly Glu Met Trp Asn Asn Thr
      35      40      45
Ala Ala Asp Asp Lys Gln Pro Tyr Glu Lys Lys Ala Ala Lys Leu Lys
      50      55      60
Glu Lys Tyr Glu Lys Asp Ile Ala Ala Tyr
65      70

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<210> 21
 <211> 85
 <212> PRT
 <213> Homo sapiens

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<400> 21
Met Gly Lys Gly Asp Pro Lys Lys Pro Thr Gly Lys Met Ser Ser Tyr
 1      5      10      15
Ala Phe Phe Val Gln Thr Cys Arg Glu Glu His Lys Lys Lys His Pro
      20      25      30
Asp Ala Ser Val Asn Phe Ser Glu Phe Ser Lys Lys Cys Ser Glu Arg
      35      40      45
Trp Lys Thr Met Ser Ala Lys Glu Lys Gly Lys Phe Glu Asp Met Ala
      50      55      60
Lys Ala Asp Lys Ala Arg Tyr Glu Arg Glu Met Lys Thr Tyr Ile Pro
65      70      75      80
Pro Lys Gly Glu Thr
      85

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<210> 22
 <211> 77
 <212> PRT
 <213> Homo sapiens

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<400> 22
Pro Thr Gly Lys Met Ser Ser Tyr Ala Phe Phe Val Gln Thr Cys Arg
 1      5      10      15
Glu Glu His Lys Lys Lys His Pro Asp Ala Ser Val Asn Phe Ser Glu
      20      25      30
Phe Ser Lys Lys Cys Ser Glu Arg Trp Lys Thr Met Ser Ala Lys Glu
      35      40      45
Lys Gly Lys Phe Glu Asp Met Ala Lys Ala Asp Lys Ala Arg Tyr Glu
      50      55      60
Arg Glu Met Lys Thr Tyr Ile Pro Pro Lys Gly Glu Thr
65      70      75

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<210> 23
 <211> 20
 <212> PRT
 <213> Homo sapiens

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<400> 23
Phe Lys Asp Pro Asn Ala Pro Lys Arg Leu Pro Ser Ala Phe Phe Leu
 1      5      10      15
Phe Cys Ser Glu

```

20

<210> 24
 <211> 216
 <212> PRT
 <213> Homo sapiens

<400> 24
 Met Gly Lys Gly Asp Pro Lys Lys Pro Thr Gly Lys Met Ser Ser Tyr
 1 5 10 15
 Ala Phe Phe Val Gln Thr Cys Arg Glu Glu His Lys Lys Lys His Pro
 20 25 30
 Asp Ala Ser Val Asn Phe Ser Glu Phe Ser Lys Lys Cys Ser Glu Arg
 35 40 45
 Trp Lys Thr Met Ser Ala Lys Glu Lys Gly Lys Phe Glu Asp Met Ala
 50 55 60
 Lys Ala Asp Lys Ala Arg Tyr Glu Arg Glu Met Lys Thr Tyr Ile Pro
 65 70 75 80
 Pro Lys Gly Glu Thr Lys Lys Lys Phe Lys Asp Pro Asn Ala Pro Lys
 85 90 95
 Arg Leu Pro Ser Ala Phe Phe Leu Phe Cys Ser Glu Tyr Arg Pro Lys
 100 105 110
 Ile Lys Gly Glu His Pro Gly Leu Ser Ile Gly Asp Val Ala Lys Lys
 115 120 125
 Leu Gly Glu Met Trp Asn Asn Thr Ala Ala Asp Asp Lys Gln Pro Tyr
 130 135 140
 Glu Lys Lys Ala Ala Lys Leu Lys Glu Lys Tyr Glu Lys Asp Ile Ala
 145 150 155 160
 Ala Tyr Arg Ala Lys Gly Lys Pro Asp Ala Ala Lys Lys Gly Val Val
 165 170 175
 Lys Ala Glu Lys Ser Lys Lys Lys Lys Glu Glu Glu Glu Asp Glu Glu
 180 185 190
 Asp Glu Glu Asp Glu Glu Glu Glu Asp Glu Glu Asp Glu Asp
 195 200 205
 Glu Glu Glu Asp Asp Asp Asp Glu
 210 215

<210> 25
 <211> 211
 <212> PRT
 <213> Homo sapiens

<400> 25
 Met Gly Lys Gly Asp Pro Lys Lys Pro Arg Gly Lys Met Ser Ser Tyr
 1 5 10 15
 Ala Phe Phe Val Gln Thr Cys Arg Glu Glu His Lys Lys Lys His Ser
 20 25 30
 Asp Ala Ser Val Asn Phe Ser Glu Phe Ser Asn Lys Cys Ser Glu Arg
 35 40 45
 Trp Lys Thr Met Ser Ala Lys Glu Lys Gly Lys Phe Glu Asp Met Ala
 50 55 60
 Lys Ala Asp Lys Thr His Tyr Glu Arg Gln Met Lys Thr Tyr Ile Pro
 65 70 75 80
 Pro Lys Gly Glu Thr Lys Lys Lys Phe Lys Asp Pro Asn Ala Pro Lys
 85 90 95

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Arg Pro Pro Ser Ala Phe Phe Leu Phe Cys Ser Glu Tyr His Pro Lys
      100      105      110
Ile Lys Gly Glu His Pro Gly Leu Ser Ile Gly Asp Val Ala Lys Lys
      115      120      125
Leu Gly Glu Met Trp Asn Asn Thr Ala Ala Asp Asp Lys Gln Pro Gly
      130      135      140
Glu Lys Lys Ala Ala Lys Leu Lys Glu Lys Tyr Glu Lys Asp Ile Ala
145      150      155      160
Ala Tyr Gln Ala Lys Gly Lys Pro Glu Ala Ala Lys Lys Gly Val Val
      165      170      175
Lys Ala Glu Lys Ser Lys Lys Lys Lys Glu Glu Glu Glu Asp Glu Glu
      180      185      190
Asp Glu Glu Asp Glu Glu Glu Glu Asp Glu Glu Asp Glu Glu Asp Asp
      195      200      205
Asp Asp Glu
      210

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<210> 26
 <211> 188
 <212> PRT
 <213> Homo sapiens

```

<400> 26
Met Gly Lys Gly Asp Pro Lys Lys Pro Arg Gly Lys Met Ser Ser Tyr
 1      5      10      15
Ala Phe Phe Val Gln Thr Cys Arg Glu Glu Cys Lys Lys Lys His Pro
      20      25      30
Asp Ala Ser Val Asn Phe Ser Glu Phe Ser Lys Lys Cys Ser Glu Arg
      35      40      45
Trp Lys Ala Met Ser Ala Lys Asp Lys Gly Lys Phe Glu Asp Met Ala
      50      55      60
Lys Val Asp Lys Asp Arg Tyr Glu Arg Glu Met Lys Thr Tyr Ile Pro
65      70      75      80
Pro Lys Gly Glu Thr Lys Lys Lys Phe Glu Asp Ser Asn Ala Pro Lys
      85      90      95
Arg Pro Pro Ser Ala Phe Leu Leu Phe Cys Ser Glu Tyr Cys Pro Lys
      100     105     110
Ile Lys Gly Glu His Pro Gly Leu Pro Ile Ser Asp Val Ala Lys Lys
      115     120     125
Leu Val Glu Met Trp Asn Asn Thr Phe Ala Asp Asp Lys Gln Leu Cys
      130     135     140
Glu Lys Lys Ala Ala Lys Leu Lys Glu Lys Tyr Lys Lys Asp Thr Ala
145     150     155     160
Thr Tyr Arg Ala Lys Gly Lys Pro Asp Ala Ala Lys Lys Gly Val Val
      165     170     175
Lys Ala Glu Lys Ser Lys Lys Lys Lys Glu Glu Glu
      180     185

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<210> 27
 <211> 205
 <212> PRT
 <213> Homo sapiens

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<400> 27
Met Asp Lys Ala Asp Pro Lys Lys Leu Arg Gly Glu Met Leu Ser Tyr

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1				5					10					15		
Ala	Phe	Phe	Val	Gln	Thr	Cys	Gln	Glu	Glu	His	Lys	Lys	Lys	Asn	Pro	
			20					25						30		
Asp	Ala	Ser	Val	Lys	Phe	Ser	Glu	Phe	Leu	Lys	Lys	Cys	Ser	Glu	Thr	
		35					40					45				
Trp	Lys	Thr	Ile	Phe	Ala	Lys	Glu	Lys	Gly	Lys	Phe	Glu	Asp	Met	Ala	
	50					55					60					
Lys	Ala	Asp	Lys	Ala	His	Tyr	Glu	Arg	Glu	Met	Lys	Thr	Tyr	Ile	Pro	
65					70					75					80	
Pro	Lys	Gly	Glu	Lys	Lys	Lys	Lys	Phe	Lys	Asp	Pro	Asn	Ala	Pro	Lys	
				85					90					95		
Arg	Pro	Pro	Leu	Ala	Phe	Phe	Leu	Phe	Cys	Ser	Glu	Tyr	Arg	Pro	Lys	
			100					105					110			
Ile	Lys	Gly	Glu	His	Pro	Gly	Leu	Ser	Ile	Asp	Asp	Val	Val	Lys	Lys	
	115						120					125				
Leu	Ala	Gly	Met	Trp	Asn	Asn	Thr	Ala	Ala	Ala	Asp	Lys	Gln	Phe	Tyr	
	130					135					140					
Glu	Lys	Lys	Ala	Ala	Lys	Leu	Lys	Glu	Lys	Tyr	Lys	Lys	Asp	Ile	Ala	
145					150					155					160	
Ala	Tyr	Arg	Ala	Lys	Gly	Lys	Pro	Asn	Ser	Ala	Lys	Lys	Arg	Val	Val	
				165					170					175		
Lys	Ala	Glu	Lys	Ser	Lys	Lys	Lys	Lys	Glu	Glu	Glu	Glu	Asp	Glu	Glu	
			180					185					190			
Asp	Glu	Gln	Glu	Glu	Glu	Asn	Glu	Glu	Asp	Asp	Asp	Lys				
	195						200					205				

<210> 28
 <211> 80
 <212> PRT
 <213> Homo sapiens

<400> 28
 Met Gly Lys Gly Asp Pro Lys Lys Pro Arg Gly Lys Met Ser Ser Cys
 1 5 10 15
 Ala Phe Phe Val Gln Thr Cys Trp Glu Glu His Lys Lys Gln Tyr Pro
 20 25 30
 Asp Ala Ser Ile Asn Phe Ser Glu Phe Ser Gln Lys Cys Pro Glu Thr
 35 40 45
 Trp Lys Thr Thr Ile Ala Lys Glu Lys Gly Lys Phe Glu Asp Met Pro
 50 55 60
 Lys Ala Asp Lys Ala His Tyr Glu Arg Glu Met Lys Thr Tyr Ile Pro
 65 70 75 80

<210> 29
 <211> 80
 <212> PRT
 <213> Homo sapiens

<400> 29
 Lys Gln Arg Gly Lys Met Pro Ser Tyr Val Phe Cys Val Gln Thr Cys
 1 5 10 15
 Pro Glu Glu Arg Lys Lys Lys His Pro Asp Ala Ser Val Asn Phe Ser
 20 25 30
 Glu Phe Ser Lys Lys Cys Leu Val Arg Gly Lys Thr Met Ser Ala Lys
 35 40 45

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Glu Lys Gly Gln Phe Glu Ala Met Ala Arg Ala Asp Lys Ala Arg Tyr
 50 55 60
 Glu Arg Glu Met Lys Thr Tyr Ile Pro Pro Lys Gly Glu Thr Lys Lys
 65 70 75 80

<210> 30
 <211> 86
 <212> PRT
 <213> Homo sapiens

<400> 30
 Met Gly Lys Arg Asp Pro Lys Gln Pro Arg Gly Lys Met Ser Ser Tyr
 1 5 10 15
 Ala Phe Phe Val Gln Thr Ala Gln Glu His Lys Lys Lys Gln Leu
 20 25 30
 Asp Ala Ser Val Ser Phe Ser Glu Phe Ser Lys Asn Cys Ser Glu Arg
 35 40 45
 Trp Lys Thr Met Ser Val Lys Glu Lys Gly Lys Phe Glu Asp Met Ala
 50 55 60
 Lys Ala Asp Lys Ala Cys Tyr Glu Arg Glu Met Lys Ile Tyr Pro Tyr
 65 70 75 80
 Leu Lys Gly Arg Gln Lys
 85

<210> 31
 <211> 70
 <212> PRT
 <213> Homo sapiens

<400> 31
 Met Gly Lys Gly Asp Pro Lys Lys Pro Arg Glu Lys Met Pro Ser Tyr
 1 5 10 15
 Ala Phe Phe Val Gln Thr Cys Arg Glu Ala His Lys Asn Lys His Pro
 20 25 30
 Asp Ala Ser Val Asn Ser Ser Glu Phe Ser Lys Lys Cys Ser Glu Arg
 35 40 45
 Trp Lys Thr Met Pro Thr Lys Gln Lys Gly Lys Phe Glu Asp Met Ala
 50 55 60
 Lys Ala Asp Arg Ala His
 65 70

<210> 32
 <211> 648
 <212> DNA
 <213> Homo sapiens

<400> 32
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 caaacttgctc gggaggagca taagaagaag caccagatg cttcagtc aa cttctcagag 120
 ttttctaaga agtgctcaga gaggtggaag accatgtctg cttaaagagaa aggaaaattt 180
 gaagatatgg caaaggcgga caaggcccgt tatgaaagag aaatgaaaac ctatatccct 240
 cccaaagggg agacaaaaaa gaagttcaag gatcccaatg cacccaagag gcttccttcg 300
 gccttcttcc tcttctgctc tgagtatcgc ccaaaaatca aaggagaaca tcttggcctg 360
 tccattgggtg atgttgcgaa gaaactggga gagatgtgga ataacactgc tgcagatgac 420

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aagcagcctt	atgaaaagaa	ggctgcgaag	ctgaaggaaa	aatacgaaaa	ggatatagct	480
gcataatcgag	ctaaaggaaa	gcctgatgca	gcaaaaaagg	gagttgtcaa	ggctgaaaaa	540
agcaagaaaa	agaaggaaga	ggaggaagat	gaggaagatg	aagaggatga	ggaggaggag	600
gaagatgaag	aagatgaaga	agatgaagaa	gaagatgatg	atgatgaa		648

<210> 33

<211> 633

<212> DNA

<213> Homo sapiens

<400> 33

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caaacttgctc	gggaggagca	taagaagaag	cactcagatg	cttcagtcaa	cttctcagag	120
TTTTCTaaca	agtgtcaga	gaggtggaag	accatgtctg	ctaaagagaa	aggaaaattt	180
gaggatatgg	caaaggcgga	caagacccat	tatgaaagac	aaatgaaaac	ctatatccct	240
cccaaagggg	agacaaaaaa	gaagttcaag	gatcccaatg	caccaagag	gcctccttcg	300
gccttcttcc	tgttctgctc	tgagtatcac	ccaaaaatca	aaggagaaca	tcctggcctg	360
tccattggtg	atgttgcgaa	gaaactggga	gagatgtgga	ataacactgc	tgcagatgac	420
aagcagcctg	gtgaaaagaa	ggctgcgaag	ctgaaggaaa	aatacgaaaa	ggatatgtct	480
gcataatcaag	ctaaaggaaa	gcctgaggca	gcaaaaaagg	gagttgtcaa	agctgaaaaa	540
agcaagaaaa	agaaggaaga	ggaggaagat	gaggaagatg	aagaggatga	ggaggaggaa	600
gatgaagaag	atgaagaaga	tgatgatgat	gaa			633

<210> 34

<211> 564

<212> DNA

<213> Homo sapiens

<400> 34

atgggcaaaag	gagaccctaa	gaagccgaga	ggcaaaatgt	catcatatgc	atTTTTTgtg	60
caaacttgctc	gggaggagtg	taagaagaag	caccagatg	cttcagtcaa	cttctcagag	120
TTTTCTaaga	agtgtcaga	gaggtggaag	gccatgtctg	ctaaagataa	aggaaaattt	180
gaagatatgg	caaagggtga	caaagaccgt	tatgaaagag	aaatgaaaac	ctatatccct	240
cctaaagggg	agacaaaaaa	gaagttcgag	gattccaatg	caccaagag	gcctccttcg	300
gcctTTTTgc	tgttctgctc	tgagtattgc	ccaaaaatca	aaggagagca	tcctggcctg	360
cctattagcg	atgttgcaaa	gaaactggta	gagatgtgga	ataacacttt	tgcagatgac	420
aagcagcttt	gtgaaaagaa	ggctgcaaag	ctgaaggaaa	aatacaaaaa	ggatacagct	480
acataatcgag	ctaaaggaaa	gcctgatgca	gcaaaaaagg	gagttgtcaa	ggctgaaaaa	540
agcaagaaaa	agaaggaaga	ggag				564

<210> 35

<211> 615

<212> DNA

<213> Homo sapiens

<400> 35

atggacaaaag	cagatcctaa	gaagctgaga	ggtgaaatgt	tatcatatgc	atTTTTTgtg	60
caaacttgctc	aggaggagca	taagaagaag	aaccagatg	cttcagtcaa	gttctcagag	120
TTTTTaaaga	agtgtcaga	gacatggaag	accatttttg	ctaaagagaa	aggaaaattt	180
gaagatatgg	caaaggcgga	caaggcccat	tatgaaagag	aaatgaaaac	ctatatccct	240
cctaaagggg	agaaaaaaaa	gaagttcaag	gatcccaatg	caccaagag	gcctcctttg	300
gcctTTTTcc	tgttctgctc	tgagtatcgc	ccaaaaatca	aaggagaaca	tcctggcctg	360
tccattgatg	atgttgtgaa	gaaactggca	gggatgtgga	ataacaccgc	tgcagctgac	420
aagcagtttt	atgaaaagaa	ggctgcaaag	ctgaaggaaa	aatacaaaaa	ggatatgtct	480
gcataatcgag	ctaaaggaaa	gcctaattca	gcaaaaaaga	gagttgtcaa	ggctgaaaaa	540
agcaagaaaa	agaaggaaga	ggaagaagat	gaagaggatg	aacaagagga	ggaaaatgaa	600
gaagatgatg	ataaa					615

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<210> 36
 <211> 240
 <212> DNA
 <213> Homo sapiens

<400> 36
 atgggcaaag gagatcctaa gaagccgaga ggcaaaatgt catcatgtgc attttttgtg 60
 caaacttggtt gggaggagca taagaagcag taccagatg cttcaatcaa cttctcagag 120
 ttttctcaga agtgcccaga gacgtggaag accacgattg ctaaagagaa aggaaaattt 180
 gaagatatgc caaaggcaga caaggcccat tatgaaagag aaatgaaaac ctatatacc 240

<210> 37
 <211> 240
 <212> DNA
 <213> Homo sapiens

<400> 37
 aaacagagag gcaaaatgcc atcgtatgta ttttgtgtgc aaacttgtcc ggaggagcgt 60
 aagaagaaac acccagatgc ttcagtcaac ttctcagagt tttctaagaa gtgcttagtg 120
 agggggaaga ccatgtctgc taaagagaaa ggacaatttg aagctatggc aagggcagac 180
 aaggcccgtt acgaaagaga aatgaaaaca tatatccctc ctaaagggga gacaaaaaaa 240

<210> 38
 <211> 258
 <212> DNA
 <213> Homo sapiens

<400> 38
 atgggcaaaa gagaccctaa gcagccaaga ggcaaaatgt catcatatgc attttttgtg 60
 caaactgctc aggaggagca caagaagaaa caactagatg cttcagtcag tttctcagag 120
 ttttctaaga actgctcaga gaggtggaag accatgtctg ttaaagagaa aggaaaattt 180
 gaagacatgg caaaggcaga caaggcctgt tatgaaagag aaatgaaaat atatccctac 240
 ttaaagggga gacaaaaa 258

<210> 39
 <211> 211
 <212> DNA
 <213> Homo sapiens

<400> 39
 atgggcaaag gagaccctaa gaagccaaga gagaaaatgc catcatatgc attttttgtg 60
 caaacttgta gggaggcaca taagaacaaa catccagatg cttcagtcag ctcctcagag 120
 ttttctaaga agtgctcaga gaggtggaag accatgccta ctaaacagaa aggaaaattc 180
 gaagatatgg caaaggcaga caggcccat a 211

<210> 40
 <211> 54
 <212> PRT
 <213> Homo sapiens

<400> 40
 Pro Asp Ala Ser Val Asn Phe Ser Glu Phe Ser Lys Lys Cys Ser Glu
 1 5 10 15
 Arg Trp Lys Thr Met Ser Ala Lys Glu Lys Gly Lys Phe Glu Asp Met
 20 25 30

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Ala Lys Ala Asp Lys Ala Arg Tyr Glu Arg Glu Met Lys Thr Tyr Ile
 35 40 45
 Pro Pro Lys Gly Glu Thr
 50

<210> 41
 <211> 53
 <212> PRT
 <213> Homo sapiens

<400> 41
 Asp Ser Ser Val Asn Phe Ala Glu Phe Ser Lys Lys Cys Ser Glu Arg
 1 5 10 15
 Trp Lys Thr Met Ser Ala Lys Glu Lys Ser Lys Phe Glu Asp Met Ala
 20 25 30
 Lys Ser Asp Lys Ala Arg Tyr Asp Arg Glu Met Lys Asn Tyr Val Pro
 35 40 45
 Pro Lys Gly Asp Lys
 50

<210> 42
 <211> 54
 <212> PRT
 <213> Homo sapiens

<400> 42
 Pro Glu Val Pro Val Asn Phe Ala Glu Phe Ser Lys Lys Cys Ser Glu
 1 5 10 15
 Arg Trp Lys Thr Val Ser Gly Lys Glu Lys Ser Lys Phe Asp Glu Met
 20 25 30
 Ala Lys Ala Asp Lys Val Arg Tyr Asp Arg Glu Met Lys Asp Tyr Gly
 35 40 45
 Pro Ala Lys Gly Gly Lys
 50

<210> 43
 <211> 54
 <212> PRT
 <213> Homo sapiens

<400> 43
 Pro Asp Ala Ser Val Asn Phe Ser Glu Phe Ser Lys Lys Cys Ser Glu
 1 5 10 15
 Arg Trp Lys Thr Met Ser Ala Lys Glu Lys Gly Lys Phe Glu Asp Met
 20 25 30
 Ala Lys Ala Asp Lys Ala Arg Tyr Glu Arg Glu Met Lys Thr Tyr Ile
 35 40 45
 Pro Pro Lys Gly Glu Thr
 50

<210> 44
 <211> 54
 <212> PRT

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<213> Homo sapiens

<400> 44

Ser	Asp	Ala	Ser	Val	Asn	Phe	Ser	Glu	Phe	Ser	Asn	Lys	Cys	Ser	Glu
1				5					10					15	
Arg	Trp	Lys	Thr	Met	Ser	Ala	Lys	Glu	Lys	Gly	Lys	Phe	Glu	Asp	Met
		20						25					30		
Ala	Lys	Ala	Asp	Lys	Thr	His	Tyr	Glu	Arg	Gln	Met	Lys	Thr	Tyr	Ile
		35					40					45			
Pro	Pro	Lys	Gly	Glu	Thr										
		50													

<210> 45

<211> 54

<212> PRT

<213> Homo sapiens

<400> 45

Pro	Asp	Ala	Ser	Val	Asn	Phe	Ser	Glu	Phe	Ser	Lys	Lys	Cys	Ser	Glu
1				5					10					15	
Arg	Trp	Lys	Ala	Met	Ser	Ala	Lys	Asp	Lys	Gly	Lys	Phe	Glu	Asp	Met
		20						25					30		
Ala	Lys	Val	Asp	Lys	Ala	Asp	Tyr	Glu	Arg	Glu	Met	Lys	Thr	Tyr	Ile
		35					40					45			
Pro	Pro	Lys	Gly	Glu	Thr										
		50													

<210> 46

<211> 54

<212> PRT

<213> Homo sapiens

<400> 46

Pro	Asp	Ala	Ser	Val	Lys	Phe	Ser	Glu	Phe	Leu	Lys	Lys	Cys	Ser	Glu
1				5					10					15	
Thr	Trp	Lys	Thr	Ile	Phe	Ala	Lys	Glu	Lys	Gly	Lys	Phe	Glu	Asp	Met
		20						25					30		
Ala	Lys	Ala	Asp	Lys	Ala	His	Tyr	Glu	Arg	Glu	Met	Lys	Thr	Tyr	Ile
		35					40					45			
Pro	Pro	Lys	Gly	Glu	Lys										
		50													

<210> 47

<211> 54

<212> PRT

<213> Homo sapiens

<400> 47

Pro	Asp	Ala	Ser	Ile	Asn	Phe	Ser	Glu	Phe	Ser	Gln	Lys	Cys	Pro	Glu
1				5					10					15	
Thr	Trp	Lys	Thr	Thr	Ile	Ala	Lys	Glu	Lys	Gly	Lys	Phe	Glu	Asp	Met
		20						25					30		
Ala	Lys	Ala	Asp	Lys	Ala	His	Tyr	Glu	Arg	Glu	Met	Lys	Thr	Tyr	Ile
		35					40					45			

Pro Pro Lys Gly Glu Thr
50

<210> 48
<211> 38
<212> PRT
<213> Homo sapiens

<400> 48
Pro Asp Ala Ser Val Asn Ser Ser Glu Phe Ser Lys Lys Cys Ser Glu
1 5 10 15
Arg Trp Lys Thr Met Pro Thr Lys Gln Gly Lys Phe Glu Asp Met Ala
20 25 30
Lys Ala Asp Arg Ala His
35

<210> 49
<211> 54
<212> PRT
<213> Homo sapiens

<400> 49
Pro Asp Ala Ser Val Asn Phe Ser Glu Phe Ser Lys Lys Cys Leu Val
1 5 10 15
Arg Gly Lys Thr Met Ser Ala Lys Glu Lys Gly Gln Phe Glu Ala Met
20 25 30
Ala Arg Ala Asp Lys Ala Arg Tyr Glu Arg Glu Met Lys Thr Tyr Ile
35 40 45
Pro Pro Lys Gly Glu Thr
50

<210> 50
<211> 54
<212> PRT
<213> Homo sapiens

<400> 50
Leu Asp Ala Ser Val Ser Phe Ser Glu Phe Ser Asn Lys Cys Ser Glu
1 5 10 15
Arg Trp Lys Thr Met Ser Val Lys Glu Lys Gly Lys Phe Glu Asp Met
20 25 30
Ala Lys Ala Asp Lys Ala Cys Tyr Glu Arg Glu Met Lys Ile Tyr Pro
35 40 45
Tyr Leu Lys Gly Arg Gln
50

<210> 51
<211> 74
<212> PRT
<213> Homo sapiens

<400> 51
Phe Lys Asp Pro Asn Ala Pro Lys Arg Pro Pro Ser Ala Phe Phe Leu

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1			5					10			15			
Phe	Cys	Ser	Glu	Tyr	Arg	Pro	Lys	Ile	Lys	Gly	Glu	His	Pro	Gly
			20					25					30	
Ser	Ile	Gly	Asp	Val	Ala	Lys	Lys	Leu	Gly	Glu	Met	Trp	Asn	Asn
		35					40					45		Thr
Ala	Ala	Asp	Asp	Lys	Gln	Pro	Tyr	Glu	Lys	Lys	Ala	Ala	Lys	Leu
	50					55					60			Lys
Glu	Lys	Tyr	Glu	Lys	Asp	Ile	Ala	Ala	Tyr					
65					70									

<210> 52
 <211> 74
 <212> PRT
 <213> Homo sapiens

<400> 52															
Lys	Lys	Asp	Pro	Asn	Ala	Pro	Lys	Arg	Pro	Pro	Ser	Ala	Phe	Phe	Leu
1				5				10					15		
Phe	Cys	Ser	Glu	His	Arg	Pro	Lys	Ile	Lys	Ser	Glu	His	Pro	Gly	
			20					25					30		
Ser	Ile	Gly	Asp	Thr	Ala	Lys	Lys	Leu	Gly	Glu	Met	Trp	Ser	Glu	
		35					40					45		Gln	
Ser	Ala	Lys	Asp	Lys	Gln	Pro	Tyr	Glu	Gln	Lys	Ala	Ala	Lys	Leu	
	50					55					60			Lys	
Glu	Lys	Tyr	Glu	Lys	Asp	Ile	Ala	Ala	Tyr						
65					70										

<210> 53
 <211> 74
 <212> PRT
 <213> Homo sapiens

<400> 53															
Phe	Lys	Asp	Pro	Asn	Ala	Pro	Lys	Arg	Leu	Pro	Ser	Ala	Phe	Phe	Leu
1				5				10					15		
Phe	Cys	Ser	Glu	Tyr	Arg	Pro	Lys	Ile	Lys	Gly	Glu	His	Pro	Gly	
			20					25					30		
Ser	Ile	Gly	Asp	Val	Ala	Lys	Lys	Leu	Gly	Glu	Met	Trp	Asn	Asn	
		35					40					45		Thr	
Ala	Ala	Asp	Asp	Lys	Gln	Pro	Tyr	Glu	Lys	Lys	Ala	Ala	Lys	Leu	
	50					55					60			Lys	
Glu	Lys	Tyr	Glu	Lys	Asp	Ile	Ala	Ala	Tyr						
65					70										

<210> 54
 <211> 74
 <212> PRT
 <213> Homo sapiens

<400> 54															
Phe	Lys	Asp	Pro	Asn	Ala	Pro	Lys	Arg	Pro	Pro	Ser	Ala	Phe	Phe	Leu
1				5				10					15		
Phe	Cys	Ser	Glu	Tyr	His	Pro	Lys	Ile	Lys	Gly	Glu	His	Pro	Gly	
			20					25					30		

Ser Ile Gly Asp Val Ala Lys Lys Leu Gly Glu Met Trp Asn Asn Thr
 35 40 45
 Ala Ala Asp Asp Lys Gln Pro Gly Glu Lys Lys Ala Ala Lys Leu Lys
 50 55 60
 Glu Lys Tyr Glu Lys Asp Ile Ala Ala Tyr
 65 70

<210> 55
 <211> 74
 <212> PRT
 <213> Homo sapiens

<400> 55
 Phe Lys Asp Ser Asn Ala Pro Lys Arg Pro Pro Ser Ala Phe Leu Leu
 1 5 10 15
 Phe Cys Ser Glu Tyr Cys Pro Lys Ile Lys Gly Glu His Pro Gly Leu
 20 25 30
 Pro Ile Ser Asp Val Ala Lys Lys Leu Val Glu Met Trp Asn Asn Thr
 35 40 45
 Phe Ala Asp Asp Lys Gln Leu Cys Glu Lys Lys Ala Ala Lys Leu Lys
 50 55 60
 Glu Lys Tyr Lys Lys Asp Thr Ala Thr Tyr
 65 70

<210> 56
 <211> 74
 <212> PRT
 <213> Homo sapiens

<400> 56
 Phe Lys Asp Pro Asn Ala Pro Lys Arg Pro Pro Ser Ala Phe Phe Leu
 1 5 10 15
 Phe Cys Ser Glu Tyr Arg Pro Lys Ile Lys Gly Glu His Pro Gly Leu
 20 25 30
 Ser Ile Gly Asp Val Val Lys Lys Leu Ala Gly Met Trp Asn Asn Thr
 35 40 45
 Ala Ala Ala Asp Lys Gln Phe Tyr Glu Lys Lys Ala Ala Lys Leu Lys
 50 55 60
 Glu Lys Tyr Lys Lys Asp Ile Ala Ala Tyr
 65 70

<210> 57
 <211> 84
 <212> PRT
 <213> Homo sapiens

<400> 57
 Gly Lys Gly Asp Pro Lys Lys Pro Arg Gly Lys Met Ser Ser Tyr Ala
 1 5 10 15
 Phe Phe Val Gln Thr Cys Arg Glu Glu His Lys Lys Lys His Pro Asp
 20 25 30
 Ala Ser Val Asn Phe Ser Glu Phe Ser Lys Lys Cys Ser Glu Arg Trp
 35 40 45
 Lys Thr Met Ser Ala Lys Glu Lys Gly Lys Phe Glu Asp Met Ala Lys

50 55 60
 Ala Asp Lys Ala Arg Tyr Glu Arg Glu Met Lys Thr Tyr Ile Pro Pro
 65 70 75 80
 Lys Gly Glu Thr

<210> 58
 <211> 92
 <212> PRT
 <213> Homo sapiens

<400> 58
 Phe Lys Asp Pro Asn Ala Pro Lys Arg Pro Pro Ser Ala Phe Phe Leu
 1 5 10 15
 Phe Cys Ser Glu Tyr Arg Pro Lys Ile Lys Gly Glu His Pro Gly Leu
 20 25 30
 Ser Ile Gly Asp Val Ala Lys Lys Leu Gly Glu Met Trp Asn Asn Thr
 35 40 45
 Ala Ala Asp Asp Lys Gln Pro Tyr Glu Lys Lys Ala Ala Lys Leu Lys
 50 55 60
 Glu Lys Tyr Glu Lys Asp Ile Ala Ala Tyr Arg Ala Lys Gly Lys Pro
 65 70 75 80
 Asp Ala Ala Lys Lys Gly Val Val Lys Ala Glu Lys
 85 90